

# Energy, Environment and National Security Directorate

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## Occupational Safety and Health Management Review

September 28, 2006

Patrick T. Sullivan

OHSAS 18001 Co-Representative

# EENS OSHAS Team

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- Biays Bowerman – NN (reassigned)
- Linda Bowerman - EE
- Bill Brown – NE
- Pat Carr – RO (OSHAS 18001 Co-Rep.)
- Rob Doty - RO
- Dave Elling - NE
- Jeanne Madaia - RO
- Paul Philipsburg – NN (new)
- Terry Sullivan - DA
- Internal and external personnel involved with the JRA/FRA development

# Meeting Agenda

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- Overview of EENS OSH Management System
- Review OSH-Related Assessments
- Discuss Stakeholder Concerns
- Review OSH Improvements
- Review Injury/Illness Reduction Initiatives
- Review OSH Performance
- Review OSH Objectives, Targets and Measures
- Financial Investments in OSH
- Senior Management Questions

# EENS OSH Management System

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- **Management System Description**
  - Defines execution and maintenance of OSHAS
  - Identifies the use of BNL Institutional Systems
- **Management Plans**
  - Objectives and Targets (Handout)
- **Hazard and Risk Identification**
  - Job Risk Assessments (JRA)
  - Facility Risk Assessments (FRA)

# Job and Facility Risk Assessments

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## ■ Summary

- 26 JRAs completed for EENS
- 15 FRAs completed for EENS
  - 2 General FRAs were completed; one for Administrative Facilities and one for Experimental Facilities
  - FRAs for each building were evaluated for Facility Specific Hazards.

\*All JRAs and FRAs as defined in the priority tables (handout) have been completed to date and are posted or being posted on the EENS OHSAS website.

# OSH-Related Assessments

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- **NSF OSHAS 18001 Desk Audit (Phase 3 Organizations) General Findings**
  - JRAs and FRAs should be complete for phase 3 organizations
  - Targets and objectives should be specific and relevant
  - Management reviews must be completed
  - Internal Audits need to be documented
- **BNL OSHAS 18001 Internal Audit of EENS**
  - SHSD
  - Two minor Non-conformances were noted
  - Corrective Actions are in place

# OSH-Related Assessments

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- **RO Electrical Safety Self Assessments**
  - Assessment of training, PPE and work practices
  - One observation made from the lines of inquiry on Work Planning and Electrical Safety was reported to SHSD Manager
- **RO Work Planning and Control Self Assessment**
  - No Corrective Actions required
- **SHSD Chemical Hygiene Plan Assessment**
  - Minor non-conformances in labs
  - Factual Accuracy to be completed by 9/29/06



# OSH-Related Assessments

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- **DOE/BHISO Non-ionizing Radiation (NIR) Audit**
  - One Finding for EENS
  - Factual Accuracy review is underway
- **DOE/BHISO Nanoscience Safety Audit**
  - Reviewed one EENS ESR in Building 490A
  - Report contains only laboratory level recommendations
  - EENS will discuss the recommendations with the Nanoscience ESH Working Group



# Stakeholder Concerns

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- No requests have been made from external stakeholders
- **Nanoscience Safety**
  - Potential stakeholders: DOE, BNL, users, CAC, civic groups, the general public and the media to name a few
  - Interim Procedure on the Approach to Nanomaterial ESH
  - EENS Participation on Nanomaterial ESH Working Group
- **Worker Safety**
  - Stakeholders are DOE, BNL management, and all employees
  - Integrating safety into all work

# OSH Improvements and Injury/Illness Reduction Initiatives

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## ■ OSH Awareness

- Current ESR and JRA matrix posted in every lab (File Box)
- OSH Topics utilized in meetings at all levels (confirmations)
- Several Safety Solution (S2) proposals made by EENS (handout)
- Management Observation Program (ALD Walkthrough), ALD performs and Research Operations tracks

## ■ Training

- All EENS employees in process of taking TQ-SafeAware
- Additional training course offered in Ergonomics for EENS
- Electrical Safety Training for affected employees

# OSH Improvements and Injury/Illness Reduction Initiatives

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## ■ Worker Exposure/Safety

- Improved IH Monitoring (NIR Audit, all baselines complete, noise, chemical and ergonomic monitoring, initiatives underway)
- Hazardous material substitution (Mercury Pressure System at Meteorology)
- Radiological Footprint reduced (Building 830, area between Hot Cells and Building 703 Counting Room)
- Lightning Detection System purchased for Tower Work
- Pallet Jack purchased for moving In-situ Neutron System
- Hand rails and non-slip treads added to facilities and vehicles after worker injury

# OSH Improvements

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## ■ Document Control

- ESR Originals and Master Copies maintained electronically
- OSHAS Management Plans, System Description, FRAs and JRAs official versions are on-line.
- EENS participation in the Small Science Working Group to coordinate document control issues (How to deal with posted operator aids throughout labs)
- Many of the OSH Improvements are directly tied to our objectives and targets.

## ■ Future Initiatives

- Work toward streamlining processes and documentation to address at the laboratory level as much as possible.
- OSHAS Implementation is on schedule.

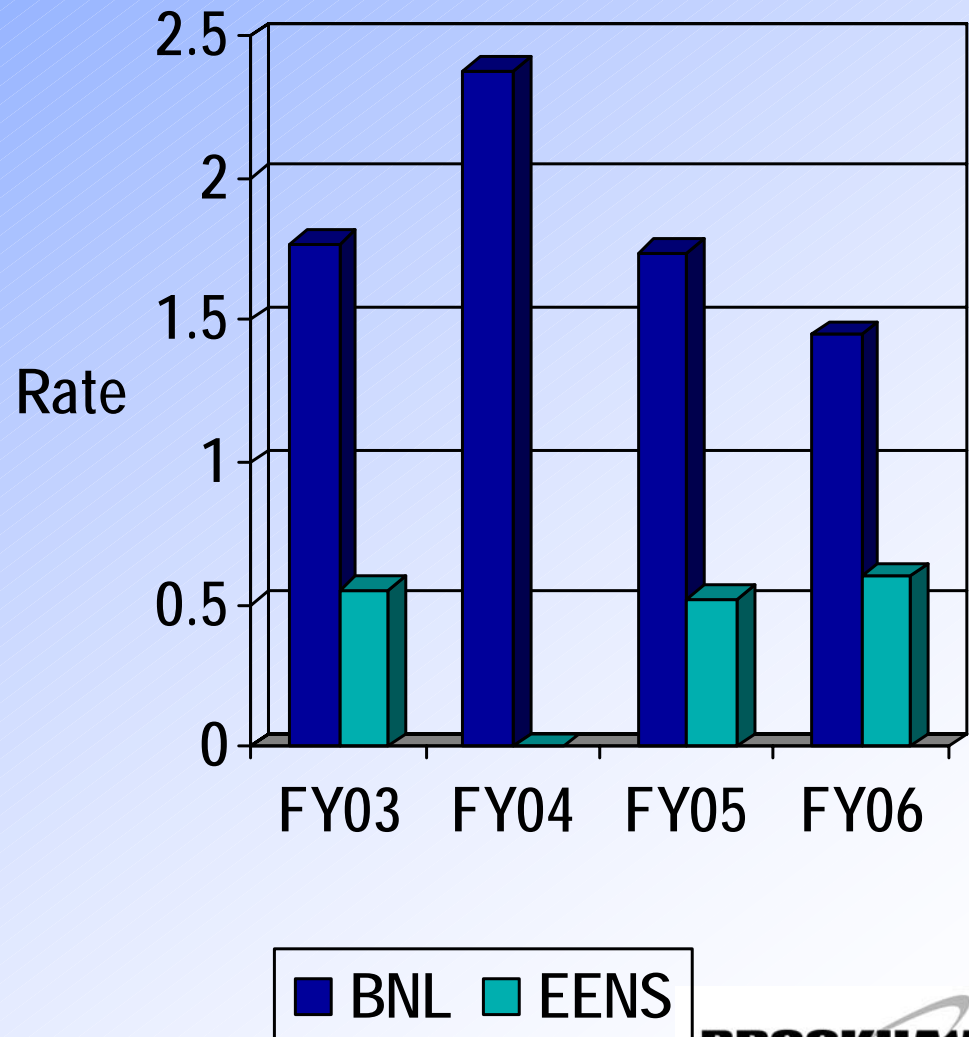
# OSH Performance: Traffic Safety

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- FY06 EENS Traffic Violations (parking, speeding and moving)
  - EE = 10 (5 parking, 4 speeding, 1 moving)
  - NN = 3 (1 parking and 2 moving)
  - NE = 5 (4 parking and 1 speeding)
  - 18 Total Violations
- Will workers take the same risks in performing their jobs?

# OSH Performance: EENS and Site Total Recordable Case Rate (TRCR) (FY03 – FY06)

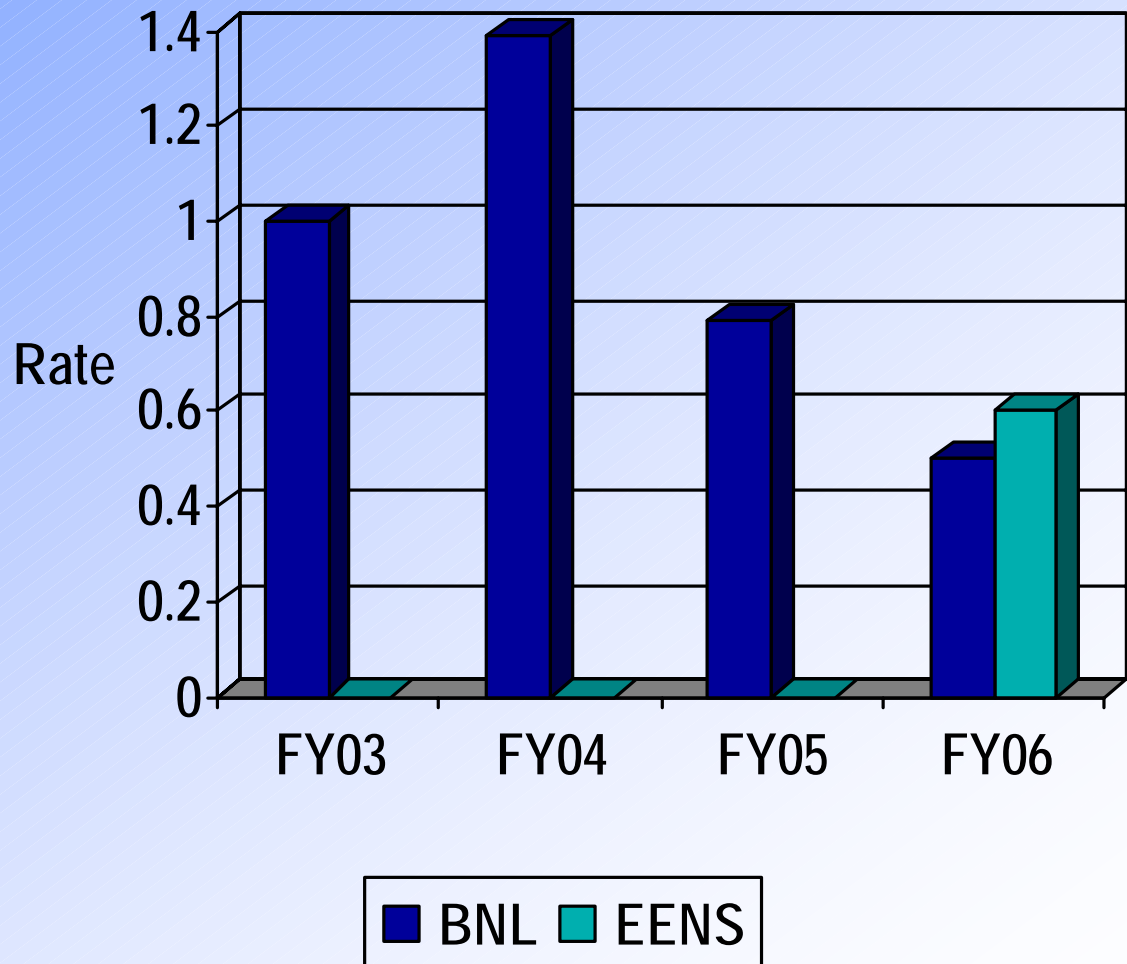
- In FY03...1 case (0.55 rate)
- In FY04...0 cases
- In FY05...1 case (0.52 rate)
- In FY06 (YTD)...1 case (.60 rate)





# OSH Performance: EENS and Site DART Rate (FY03 – FY06)

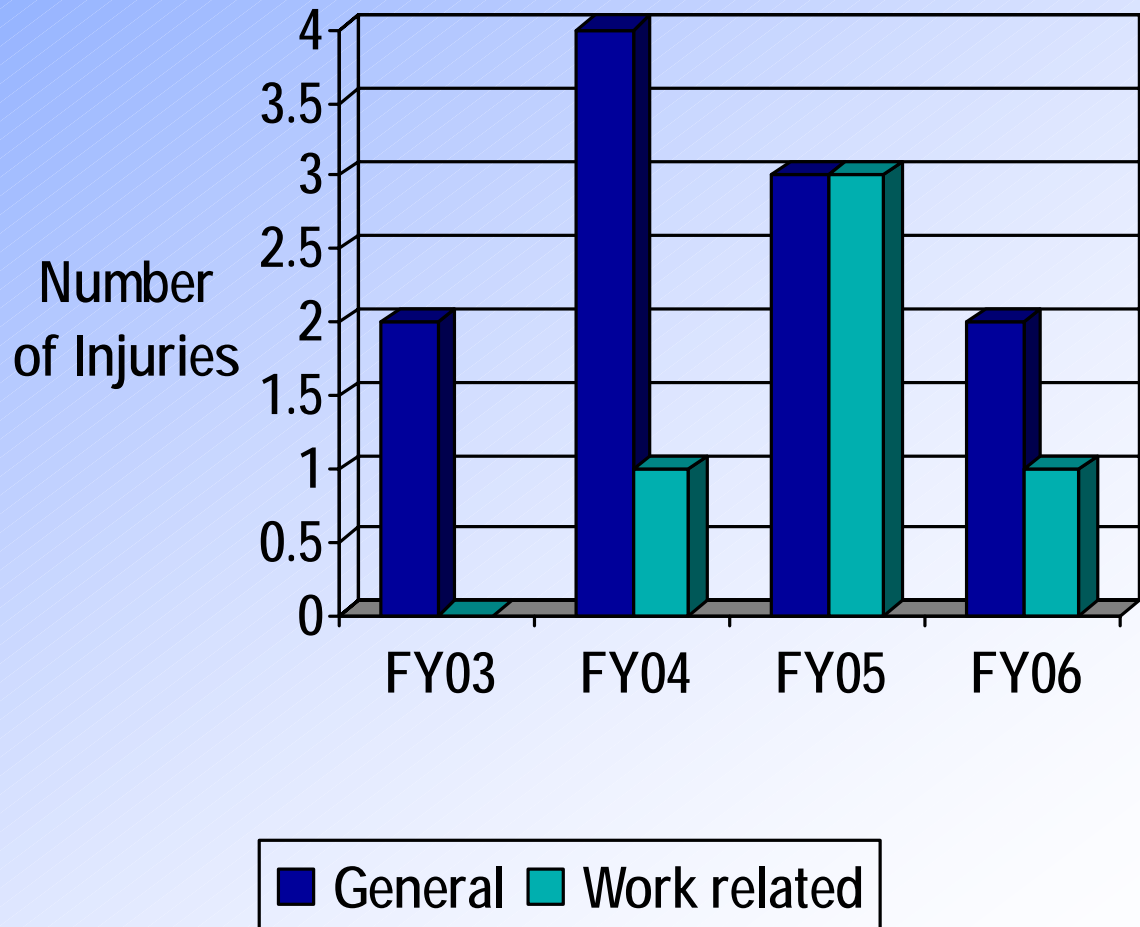
- In FY03, there were 0 DART cases.
- In FY04, there were 0 DART cases.
- In FY05, there were 0 DART cases.
- In FY06, there was 1 DART case. (0.60 rate)





# OSH Performance: EENS Injuries (FY03 – FY06)

- In FY03, there were 2 injuries.
- In FY04, there were 5 injuries.
- In FY05, there were 6 injuries.
- In FY06, there were 3 injuries.



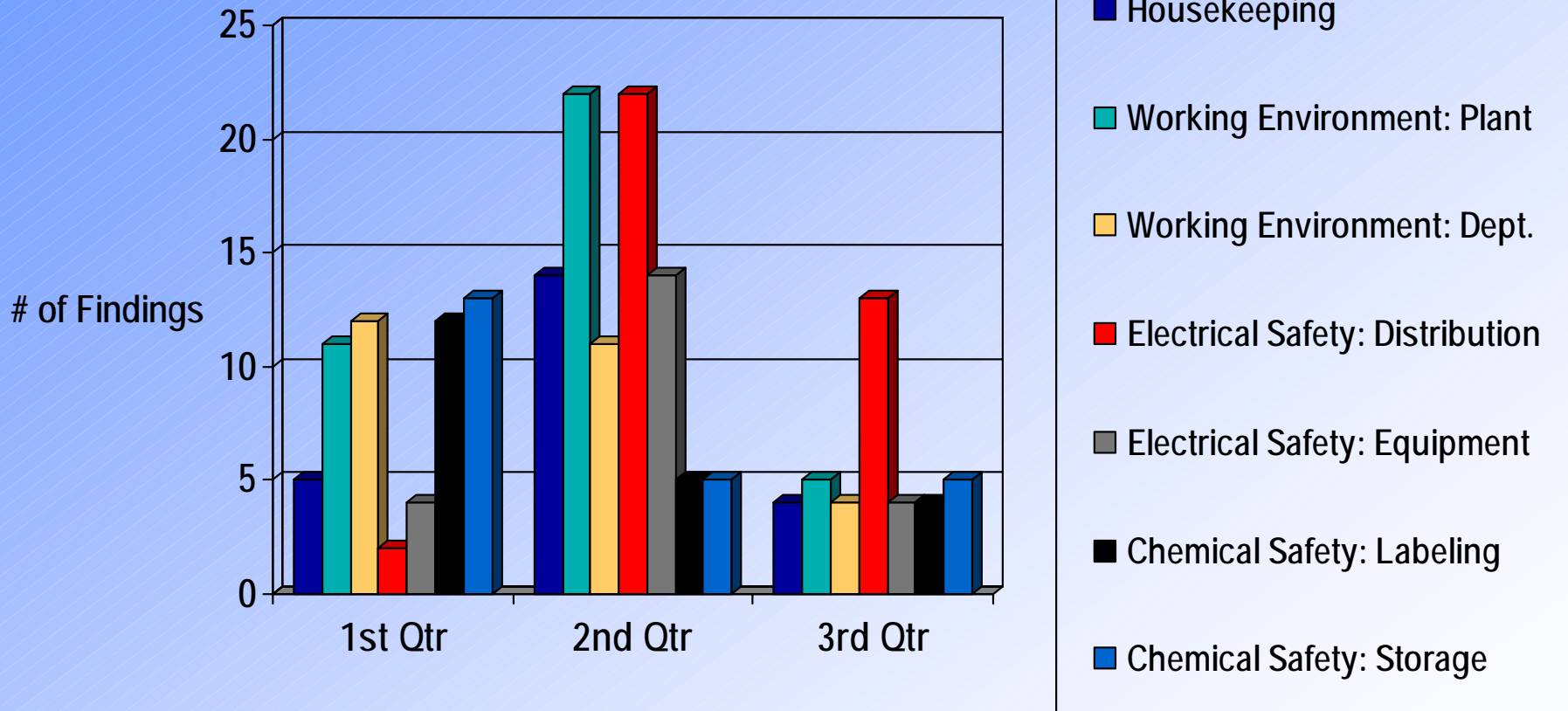
# OSH Performance – Tier I Inspections

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- 52 Tier I's completed in FY06 (22 were self-inspections)
- All EENS Tier Is are performed Quarterly.
- All Tier I findings are supposed to be dispositioned within 90 days. (Getting better)
- Typical deficiencies include general housekeeping, working environment, electrical safety and chemical safety issues.
- Improvements are continuing.

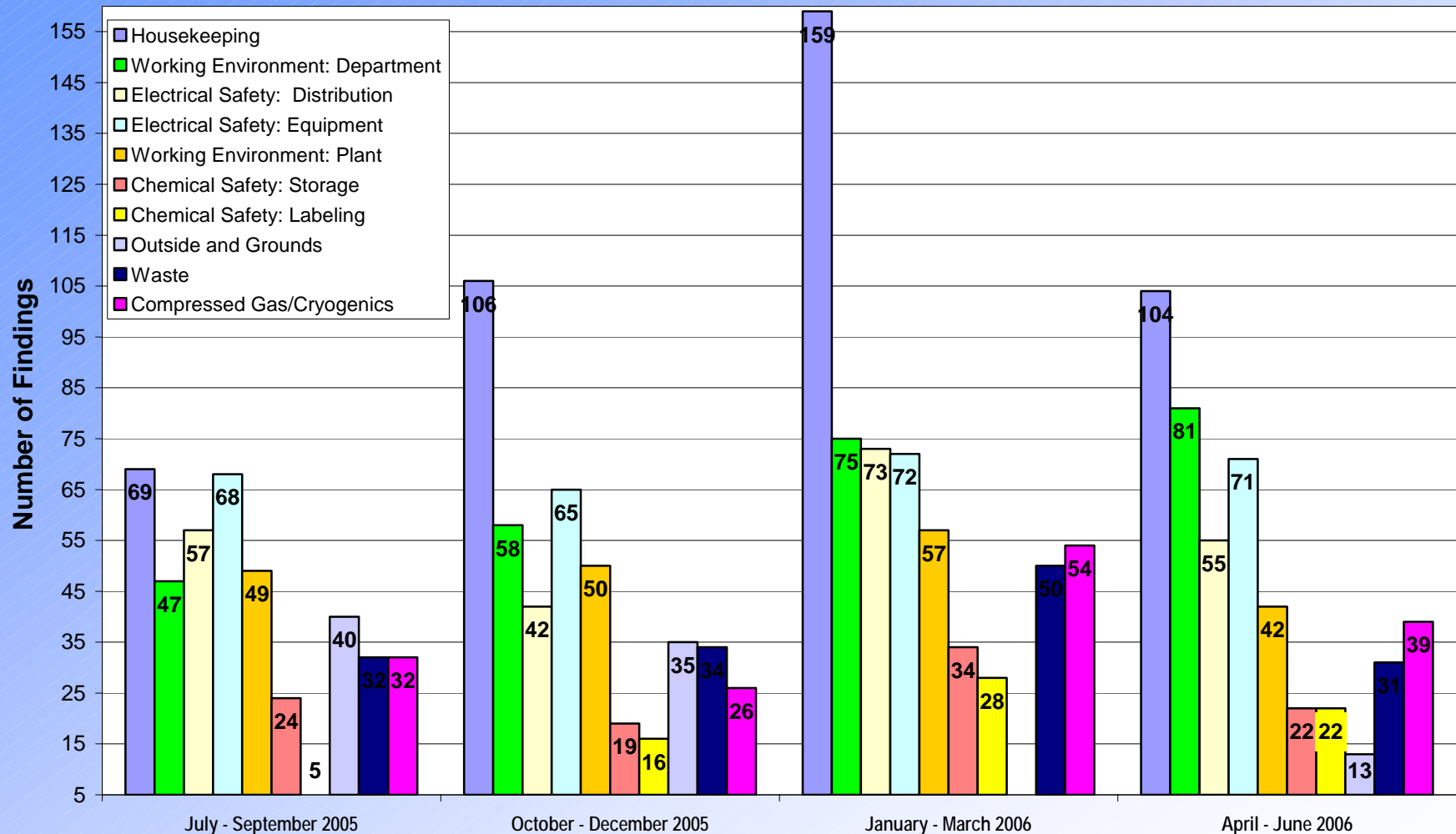
# EENS Tier I Inspections

## Top Seven Categories FY 2006



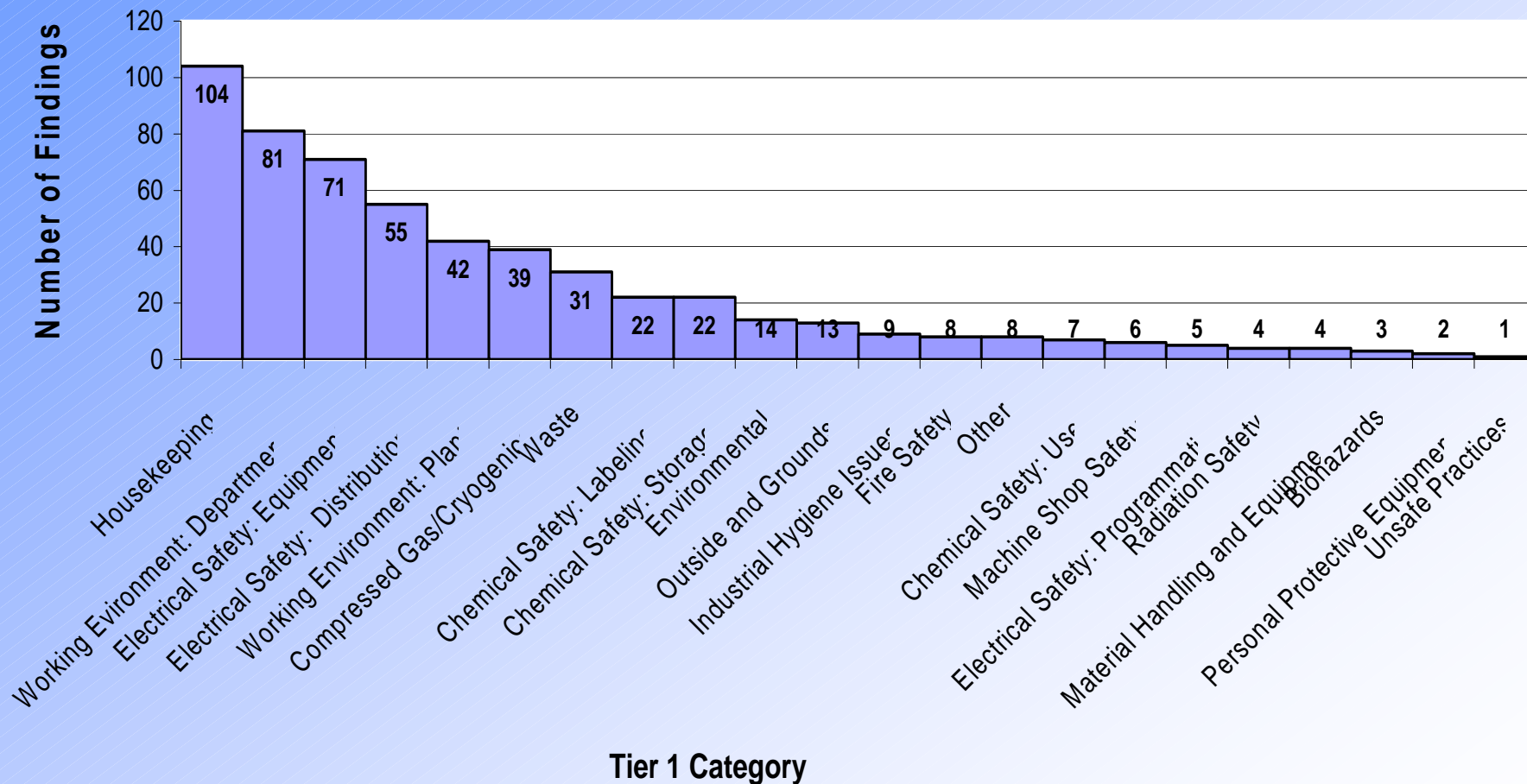
# BNL Tier I Inspection Results

## Top Ten Categories/Quarter



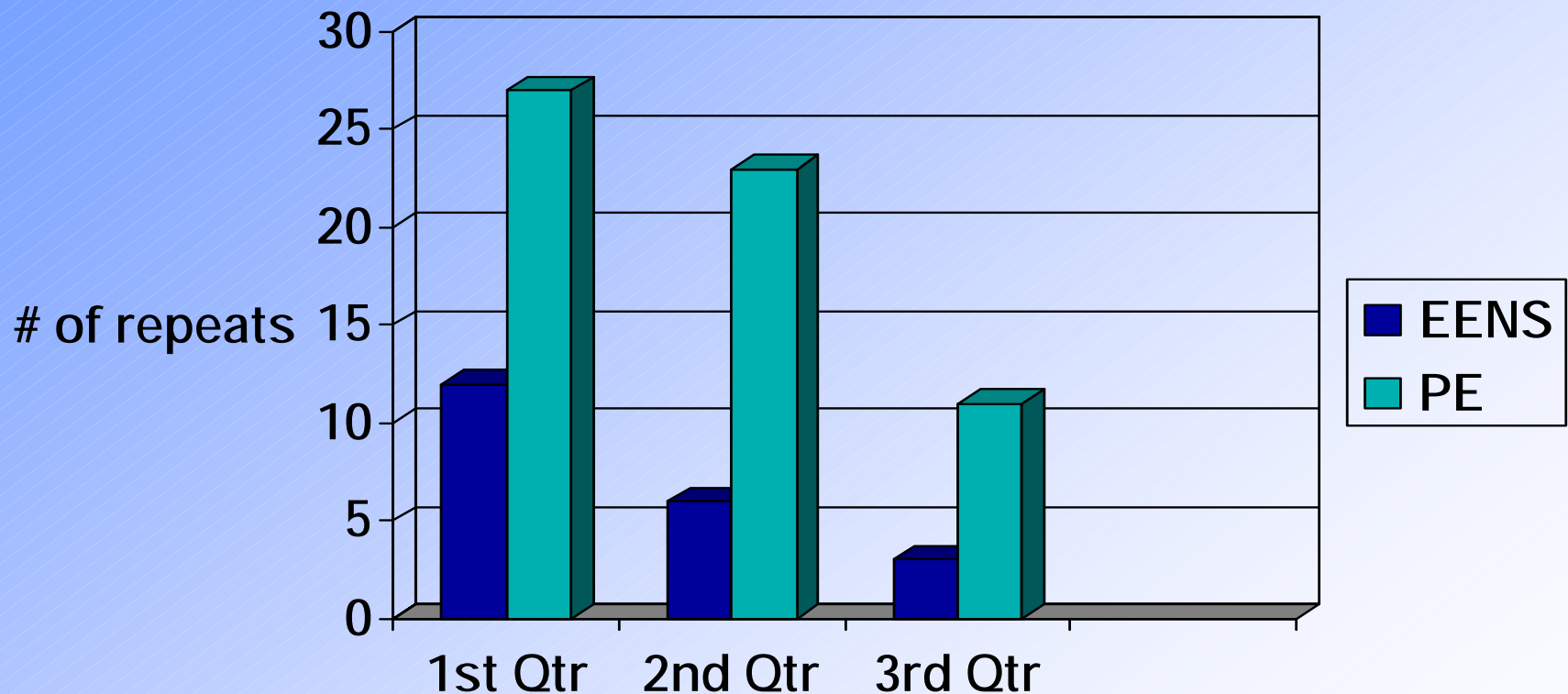
# BNL Third Quarter FY06 Tier I Inspection Results by Category

Total Findings = 551



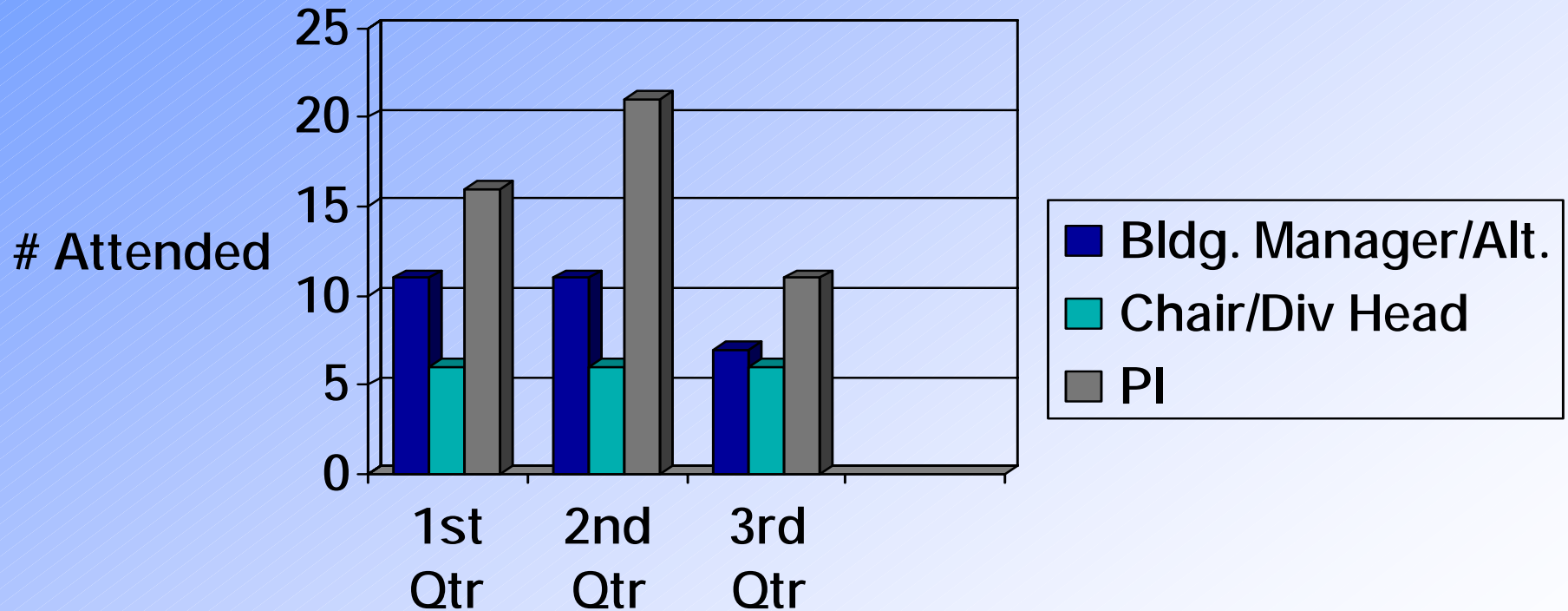
# EENS Tier I Inspections Repeat Findings FY 2006

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# EENS Tier I Inspections Participation FY 2006

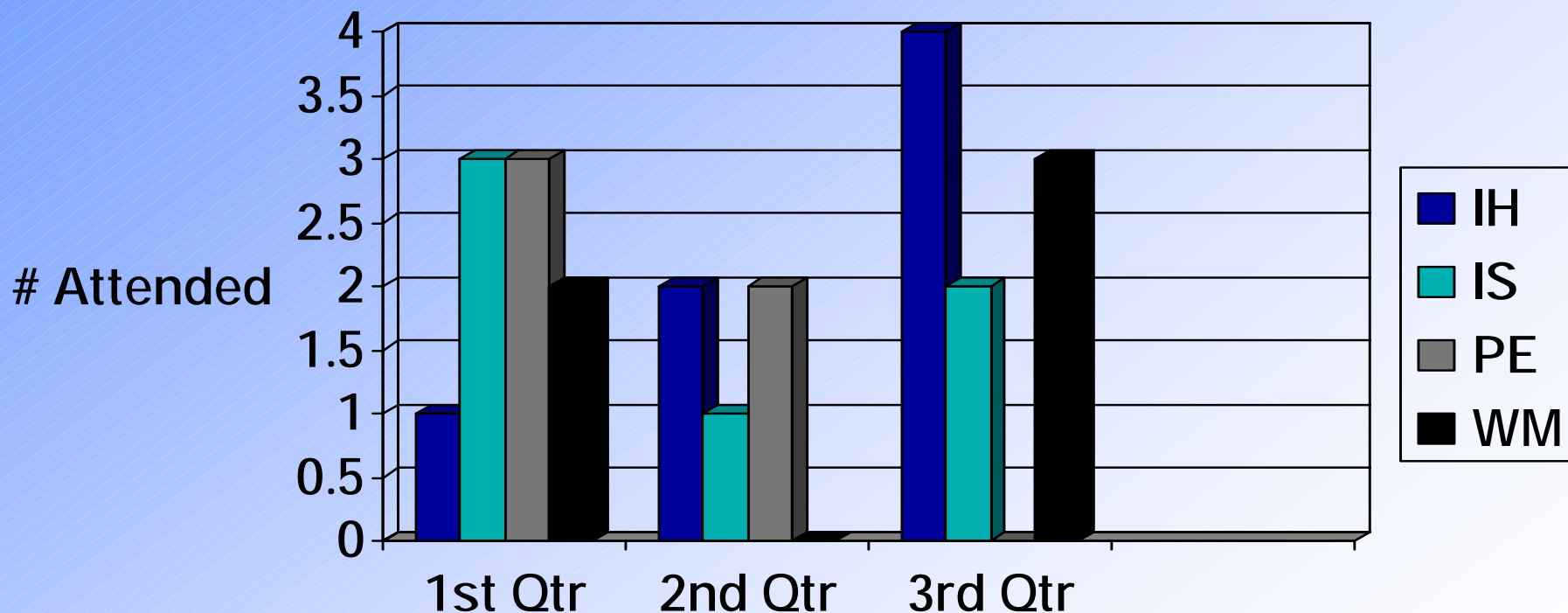
## EENS Only (8 Inspections/quarter)





# EENS Tier I Inspections Participation FY 2006

Non-EENS (8 Inspections/quarter)



# OSH Performance - OSHA

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## External OSHA Assessment – FY05 Status of Findings

- Total of 51 facility-related citations
- An example of a facility-related citation: tempered eye wash stations
- All EENS Citations have been closed

# OSH Costs and Resources

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- 26 JRAs and 15 FRAs

- RO 116 hours
- EENS Staff 236 hours
- SMEs 50 hours

~\$40,200

- OSHAS Meetings

- RO 252 hours
- EENS Staff 104 hours
- SMEs 4 hours

~\$36,000

- Training (Current/Anticipated)

- Approx. 100 person-hours

~\$10,000

- Implementation and Documentation

- RO Effort 500 hours

~\$50,000

Total \$136.2 K

# EENS OSH Objectives and Targets FY06

## Objective: Injury-Free Workplace

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- Improve Staff and Management Awareness/Participation in Safety and Health
  - Improve Work Planning Awareness
- Improve Compliance with Safety and Health Requirements/Regulations
  - Improve Industrial Hygiene Monitoring
- Improve Operational Performance
  - Improve Tier I Performance
- Improve Health and Safety Performance by Registration of the EENS in the Occupational Safety and Health Management System as part of the OSHAS 18001 Phase 3 Project
  - Communicate responsibilities

# Effects of Foreseeable Changes to Legislation

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- 10 CFR 851 Rule: Worker Safety and Health Program “Proposed Rule”
  - Rule provides DOE with enforcement mechanism similar to PAAA
  - Rule pulls in consensus requirements and makes them mandatory (e.g. ANSI, ASTM etc.)
  - Rule first published in 12/03 to codify existing practices in order to ensure worker safety and health

# Effects of Foreseeable Changes to Legislation

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- BNL must achieve compliance with the 851 Rule within 1 year of the effective date of 2/9/07
  - We must reapply for all waivers (exemption process)
  - Contractors are subject to civil penalty of up to \$70K per day per violation up to contract annual fee.
  - BNL Plan must be approved by 5/25/07
  - Significant costs are expected by implementing 851
    - Initial implementation/administration \$600K
    - Facility upgrades to meet codes \$50.7 million
- Total estimated lab impact \$51.3 million**
- Ongoing maintenance activities \$1.1 million
- Numbers represent Lab level costs only.



# Management Review Decisions

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- Is the OSH Management System effective in achieving policy commitment?
- Is the OSHMS effective in achieving the objectives, targets and performance measures?
- Is the OSHMS adequate in terms of:
  - Identifying hazards and controls?
  - Resource allocation?
  - Information systems?
  - Organizational issues – staff expertise; procedural requirements?



# Management Review Decisions

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- Are the objectives, targets and performance measures suitable in terms of:
  - Injuries/illnesses?
  - Current and future regulatory requirements?
  - Business interests, technological capability?
  - Internal organizational or process changes?
  - **Should additional objectives, targets or performance measures be established?**